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New Wisconsin Records for *Cyclocephala Lurida* (Coleoptera: Scarabaeidae)

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NEW WISCONSIN RECORDS FOR *CYCLOCEPHALA LURIDA* (COLEOPTERA: SCARABAEIDAE)

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ABSTRACT

Cyclocephala lurida Bland (Coleoptera: Scarabaeidae) is a dynastine scarab beetle previously unknown from Wisconsin. Two specimens, one male and one female, were found on the University of Wisconsin-Madison campus. A third specimen was recovered from a blacklight trap in southwestern Wisconsin. Although establishment in the state remains open to question, this species is of potential economic concern as larvae are capable of causing significant damage to lawns, turfgrass, and crops.

Cyclocephala lurida Bland (Coleoptera: Scarabaeidae), commonly known as the southern masked chafer, belongs to the largest genus in the subfamily Dynastinae. *Cyclocephala* contains around 300 species and is restricted to the New World (Ratcliffe and Cave 2002). Fourteen species of *Cyclocephala* occur in the United States (Ratcliffe 1991). Aside from some species of economic concern (including *C. lurida*), the biology and immature stages of many species remain poorly known.

While Endrodi (1985) recorded *Cyclocephala longula* LeConte from Wisconsin, no further data have become available nor have any specimens been collected to confirm its presence in Wisconsin. The Endrodi record may have been in error since *C. longula* is a western species with easternmost confirmed records from east-central Nebraska (Ratcliffe 1991). In a checklist of Wisconsin Scarabaeoidea Kriska and Young (2002) listed *C. lurida* and *Cyclocephala borealis* Arrow as species that could potentially occur in Wisconsin. Both species are recorded from the surrounding states of Illinois, Indiana, and Iowa.

The three *C. lurida* specimens represent a new state record for Wisconsin. Two were collected by the authors along a sidewalk on the University of Wisconsin-Madison campus (Dane County) on 5 August 2003. The specimens were identified by the senior author and deposited in the Insect Research Collection (IRC) at the University of Wisconsin-Madison Entomology Department. The third specimen was collected in a blacklight trap in Nelson Dewey State Park, Grant County, 11-18 July 2004. The trap was located near a stream in a conifer forest/dry lime prairie setting. The specimen was identified by the senior author and deposited in the IRC. *C. lurida* is found throughout most of the United States, excluding the Pacific Northwest (Endrodi 1985, Pike et al. 1976, Pike et al. 1977, Bauernfeind 2001) and is probably one of the most abundant *Cyclocephala* species in the Midwest.

DISCUSSION

The presence of *C. lurida* in Wisconsin is noteworthy because of its potential to cause damage to lawns, pastures, and crops. The species has a one-year life cycle (Ratcliffe 1991) with the non-feeding adults active from June into early August, and commonly attracted to lights (Ritcher 1966). Eggs are deposited in the soil during the period of adult activity. Ritcher (1944, 1966) described and illustrated the larva under the name *Cyclocephala immaculata* (Olivier). Larvae live in the soil and feed on plant roots. Ritcher (1966) also reported larvae

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in piles of manure and decaying organic material. High larval densities have been known to damage lawns, turfgrass, pastures, corn fields, and wheat fields. Whereas *C. lurida* is considered one of the most destructive turfgrass insect pests in the Midwest (Zenger and Gibb 2001), not all turfgrass is infested every year. Both abiotic and biotic factors affect *C. lurida* densities (Potter 1983, Potter and Gordon 1984). Rice (1994) concluded that although *C. lurida* larvae can cause some damage to corn and soybean plants, they did not affect germination, emergence or survival, nor did they significantly affect leaf area, root weight, or total dry weight.

The discovery of only three adult specimens in Wisconsin over the past three years suggests that *C. lurida* may not yet be established this far north in the Great Lakes region. Larvae have yet to be reported by workers associated with the turfgrass or agriculture industries in Wisconsin. Possibly southern Wisconsin represents the northernmost edge of its range. Blacklight trapping during the adult activity period, particularly in areas with extensive farmland, such as southcentral and southeastern Wisconsin, is recommended.

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